Bruhath Bangalore Mahanagara Palike Dasarahalli Zone

e of Work: Providing RO Plant In Ward no 13 Shettyhalli Sub Division — Estimate Cost Rs.15 Lakhs

Description of item	Unit	No	L	B	D	Qty	Rate	Amount
SRB 2-2.2 : Earthwork excavation for foundation of buildings, water cum supply, sanitary lines and lectrical conduits either in pits or in trenches1.5m and above in width, in hard soil not exceeding 1.5 . In depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil ear from edges of excavation with lead upto 50 m.after breaking of clods complete as per pecifications,specification. No. KBS 2.1(b)/2:3.5 PWD SR - 2016-17								
RO Plant								
For SSM Foundation								
Long Wall		2	4.60	1.00	1.00	9.20		
Short Wall		2	3.70	1.00	1.00	7.40		
For Water supply		1	86.00	1.00	1.00	86.00		
	Cum					102.60	305.64	31358.66
KSRB 4-1.2 : Providing and laying in position plain cement concrete of cum mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2								
RO Plant								
For SSM Foundation								
long wall		2	4.60	1.00	0.15	1.38		
Short Wall		2	3.70	1.00	0.15	1.11		
For Flat Form		1	4.60	3.70	0.10	1.70		
	Cum				Total Qty	4.19	5449.68	22845.06
KSRB 5.2-2 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13								
RO Plant								
For SSM Foundation								
long wall		2	4.60	0.75	0.60	4.14		
Short Wall		2	3.70	0.75	0.60	3.33		
	Cum				Total Qty	7.47	4521.96	33779.04
KSRB 5.3-3: Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at 2m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13)								
RO Plant								
For SSm Foundation								
long wall		2	4.60	0.45	0.50	2.07		

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Retaining Wall								
	Cum	2	3.70	0.45	0.50	1.67		
					Total Qty	3.74	5405.40	20189.17

KBS 4-1 6 : Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 0kgs, with 20mm and down size graded cum granite metal coarse aggregates @ 0.878 cum and e aggregtes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms, thick, well onstructed, in foundation, plinth and cills, nciuding cost of all materials, labour, HOM of machinery, ring complete as per specifications. Specification No. KBS 4.1, 4.2

HO Plant								
Chipping								
Foundation								
	Cum	2	4.60	0.45	0.10	0.41		
					Total Qty	0.41	5876.28	2432.78

KBS 4 2 7 : Providing and laying in position reinforced cement concrete of design mix M25 with PC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates 0.70cum and fine aggregtes @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, Unties, pillars, posts, struts, buttresses, ming or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fiHets etc., cluding cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of einforcement as per specifications,specification No. KBS 4.1, 4.6

HO Plant								
or Flat FORM								
		1	4.60	3.70	0.15	2.55		
	Cum				Total Qty	2.55	6876.36	17555.35

KBS 4-6 7 : Providing and removing centering, shuttering, strutting, propping etc., and removal of rm work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and bels not exceeding 1 m in depth including cost of all materials, labour complete as per ecifications. Specification NO KBS 4.6.2 Page No. 16/ Item No. 4.34/ PWD SR 2016-17

HO Plant								
d concrete for Flatform		2	8.30		0.15	2.49		
	Sqm				Total Qty	2.49	276.48	688.44

KBS 4 9 2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, ding, hooking, placing in position, lapping and / or welding wherever required, tying with binding e and anchoring to the adjoining members wherever necessary complete as per design (laps, ks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery plete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500

Plant								
el								
One Cum 100Kgs of Concrete		1	2.55	100		255.30		
	Tonne				Total Qty	0.26	65455.56	16710.80

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KSRB 7.5 : Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips; suspension shaft with high tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & pull operations complete including pulling hooks, 4Nos. handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8 m
Specification No. KBS 7:107 7.12

RO Plant								
Rolling Shutter		1	2.40		2.60	6.24		
	Sqm				Total Qty	6.24	3090.96	19,287.59

KSRB 7.6 : Providing and fixing top covers made out of 20 guage M.S. sheet over pull and push rolling shutters bent to shape including cost of red lead primer coat of painting , materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 7.10.6/7.12

RO Plant								
Rolling Shutter		1	2.40			2.40		
	Mtr				Total Qty	2.40	510.84	1226.02

KSRB 7.15 : Providing, fabricating, assembling and fixing in position aluminium partitions using aluminium sections of mat finish or glassy finish in combination of plain grove, single grove and double grove as per requirements for the frames of overall size 63.5mm x 38.1 mm. with thickness of 2mm. having section weight, plain sections 1.054kg/m, single grove thickness 1.95mm. section weight 1.094kg/m» double grove thickness 1 9mm section weight 1.094kg/m and bottom member 114.3 mm. x 44.45mm. thickness 3.18mm. weight 2.646 kg/m; aluminium louvres section of size 36. 5mmx34.93mm 1.45mm. thick section weight 0.429kg/m; bottom portions provided with 12mm. thick prelaminated sheet both sides of approved colour lamination exterior grade upto G.9m height, spacing of vertical member not exceeding 0.6 m. c to c; sections are cut to the required lengths, joints mitered and corners grinded subdividing frames tennoned and rivetted to the frames; the assembled frame stiffened with corner angles, stripped and fixed with screws, raw! plugs and teak wood gutties to R.C.C.columns on sides, R.C.C. lintels or beams at top and floor at bottom, including cutting chistelling and making good with cement mortar to match the surface; providing and fixing 5.5mm. thick plain glass for middle portion viz., fr.9m. to 2.13 m. and top panel with louvres sections; the glass and panels fitted with glazing clips of 19mmx17.3mm. of thickness 0.9mm. weight 0.124kg/m, aluminium sections treated for removal of any rust and prevention of further rust formation, coated with greasy materials for non-adherence of mortars or any other sticky materials; vertical members embedded in the flooring by making suitable sized holes and fixing with cement mortar, with necessary opening for fixing of door of standard size (excluding cost of door) all the frame thoroughly cleaned, free from rust, scale or dirt including cost of materials, fixtures, labour and HOM of machinery complete as per specifications.using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.

RO Plant								
		2	4.60		3.00	27.60		
		2	3.70		3.00	22.20		
	Sqm				Total Qty	49.80	3566.16	177594.77

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KSRB 7.17 : Providing, fabricating, assembling and fixing in position aluminium doors using powder coating, aluminium mat finish or glossy finish, outer frame plain section 101.6x44.45mm thickness 3.18mm, section weight 2.404 kg/m, door shutters vertical section 44.62x44.45mm thickness 3.00mm, section weight 1.505kg/m, top . section 47.62x44.45mm thickness 3.00mm, section weight 1.420kg/m bottom section 114.3x44.45 thickness 3.18mm, section weight 2.646kg/m, door central section 49.91 x44.45mm thickness 3.00mm, section weight 1.495 kg/m glazing clips 19x17.3x11 mm thickness 0.9mm section weight 0.124kg/m; aluminium sections cut to length joint metred corners grinded, the shutters pivoted opening arrangement with heavy duty aiuminium alloy automatic door closures floor mounted, providing and fixing standard approved accessories, such as aluminium handle for full width or length, tower bolts, lock, pivots: P.V.C. or rubber gasket with 5.5mt. thick plain glass for top and bottom panel; aluminium sections treated for removal of any rust and prevention of further rust formation, and coated with greasy materials for n on-ad h era nee of mortars or any other sticky materials; the assembled frame fitted with the corner angles, strips and fitted with screws, rawl plugs orteakwood gutties to R.C.C. columns or masonry on sides, beams and flooring in bottom, including cutting, chistling and making good with cement mortar to match the surface; all the frames throughly cleaned free from rust, scale, or dirt including cost of materials, fixtures, labour and HOM of machinery complete as per specifications.using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality. As per 7.17.2

RO Plant								
Aluminium Doors	Sqm	1	1.50		2.10	3.15		
					Total Qty	3.15	6814.80	21466.62

KSRB 15-18.1 : Applying red lead ready mix priming coat over new steel or other metal surface including preparing the surface after throughly cleaning oil, grease, dirt and other foreign matter, and scoured with wire brushes, fine steel wool, sand papers including cost of materials, labour, complete as per specifications.(P.No- 121,lt. No-15.73 of KPWD S.R 2016-17)

RO Plant	Sqm							
Rolling Shutter		1	2.40		2.60	6.24		
					Total Qty	6.24	31.32	195.44

KSRB 15-18.2 : Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.(P.No-121,lt. No-15.74 of KPWD S.R 2016-17)

RO Plant	Sqm							
Rolling Shutter		1	2.40		2.60	6.24		
					Total Qty	6.24	88.56	552.61

PROVIDING TRAPEZOIDAL PROFILED SHEET Providing and installing of pre painted Galvolume iron Trapezoidal profiled sheet of approved make 1060 mm width (1000 mm cover width), 28-30 mm crest height with crest distance of 200 mm c/c with 2 ribs at the centre for stiffening. The total coated thickness (TCT) of the sheet will be 0.47 mm +/- 0.02 mm tolerance Zinc-Alu Alloy coating AZ150 gsm as per ASTM 1397/A755-550 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 20-22 microns using self drilling/self tapping screws of 25 mm length, to be fixed over the existing purlins, rafters, channels and trusses.

RO Plant	Sqm							
		1	5.50	4.50		24.75		
					Total Qty	24.75	831.60	20582.10

Supply of water purification unit , installation and commissioning 1000LPH with Chloride Plant with mild steel vessel without UV

RO Plant	Nos	1				1.00		
					Total Qty	1.00	615000.00	615000.00

Additional price for installation of Ultra Voilet System

RO Plant	Nos	1				1.00		
					Total Qty	1.00	10000.00	10000.00

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Water supply	Nos	1	86.00	1.00	0.30	25.80		
					Total Qty	25.80	1060.00	27348.00

RB 12 -1.1 : Providing and laying in position to required level or slope 230mm internal diameter glazed stoneware pipes grade A and jointing with stiff mixture of cement mortar in proportion of testing of pipes and joints,including cost of materials, labour charges complete as per cifications.Specification No. KBS 12.2.5/12.7 (Page No.70, Item No. 11.4)PW,P&IWTD SR 2018-

Water supply	Mtr	1	86.00			86.00		
					Total Qty	86.00	472.76	40657.36

RB M400- Wet Mix Macadam KSRRB M400-17. Providing, laying, spreading and compacting hed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre g the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to laying in uniform layers with paver in sub-base/base course on well prepared surface and pacting with vibratory roller to achieve the desired density complete as per specifications. TH Specification No. 406 (Page No.155, Item No.20.18,PW,P & IWTD SR 2018-19)

Water supply	Nos	1	86.00	1.00	0.15	12.90		
					Total Qty	12.90	2001.28	25816.51

RB M600-1. Construction of dry lean cement concrete mix CC1:5:10 with OPC cement Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine gates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate rming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after ng to be as per Table 600-1, cement content not to be less than 150 kg/ cum, optimum ire content to be determined during trial length construction, concrete strength not to be less 0 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver , compacting 10 tonnes vibratory roller, finishing and curing complete as per specifications.do OPC At /cum and coarse agggregate 0.86 cum, fine aggregate 0.58cum using concrete batch mix t 75cum/hr capacity with fixed form paver (P.No-174,I No-22.1.2)

ter supply	Nos	1	86.00	1.00	0.15	12.90		
					Total Qty	12.90	3884.90	50115.21

t concrete pavement.Construction of un-reinforced plain cement concrete pavement, ss as per design, over a prepared sub base with OPC cement or any other type as per 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse ates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed- nixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher pproved mix design, laid in approved fixed side form work (steel channel, laying and fixing of ron thick polythene film, wedges, steel plates including levelling the form work as per). Spreading the concrete with shovels, rackers compacted using needle, screed and plate and finished in a continuous operation including provision of contraction, expansion, tion and longitudinal joints including groove cutting charges, joint filler, separation ne, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines es as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse te @ 0.69cum and fine aggregate @ 0.46cum) (Page No. 175.tem No.22.6.1,PW,P & IWTD -19.)

r supply	Nos	1	86.00	1.00	0.15	12.90		
					Total Qty	12.90	5210.96	67221.38

3; Filling available excavated earth (excluding rock) in sides cum of foundations upto plinth not exceeding 20 cms. in depth, compacting each deposited layer by ramming after with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per tions. Specification. No. KBS 2.9 (I.No:2.10, P.No:6, SR 2016-17)

t.								
otal Earth Excavation						51.30		

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	Cum					Total Qty	51.30	137.16	7036.31
Electricals Work for RO Plant									
Concealed Conduit System Supplying heavy gauge PVC conduit pipe 19/20mm dia 2mm thick conforming to IS 2509 with suitable size bends, metal/PVC junction boxes adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipes ends should be covred using PVC end enclosures. run with 18SWG GI fish wire wherever necessary.19/20mm dia 2mm thick(P.No-2 ,I No-1.2.1 of PWD S.R 2014-15)									
PVC conduit pipe 9/20mm	Rmt		2	40.0			80.00	43.00	3440.00
Wiring for lighting/power circuit using one of FRLS PVC insulated 1100v grade, multistrand Copper conductor single core cable in open or concealed system of wiring with specified IS-694:1990 & conforming to GTP of (,I No-2.5 of PWD S.R 2014-15)									
Group-A.									
1.0 Sqm	Rmt		2	100.0			200.00	13.00	2600.00
2.5Sqm			2	70.0			140.00	29.20	4088.00
4.0Sqm			2	30.0			60.00	42.10	2526.00
Point wiring using Copper wire without switch.Supplying and wiring adopting loop system in existing PVC Conduit/casing capping using 1100V Grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2x1.5 Sq.mm Cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose lenght in a wood/PVC round block. complete for each outlet.(5/2.3)(,I No-2.3 Pg No. 5of PWD S.R 2014-15)									
Using class A materials	Each								
Short point up to 3mtrs from tapping point to out let via switch			8				8.00	144.00	1152.00
Medium point a above 3mtr up to 6mtr from tapping point to out let via switch			4				4.00	215.00	860.00
Long point a above 6mtr up to 10mtr from tapping point to out let via switch			2				2.00	334.00	668.00
Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/ dimmer/telephone socket etc on existing modular switch plate.. Is 3854 and IS 1293. (16/3.7) (Page No - 16, I No-3.7of PWD S.R 2014-15)									
5Amps SP Switch (I No-3.7.1 of PWD S.R 2014-15)	Nos		4				4.00	63.00	252.00
5Amps 3way 5 pin socket (I No-3.7.3 of PWD S.R 2014-15)			4				4.00	95.00	380.00
16Amps SP Switch (I No-3.7.7 of PWD S.R 2014-15)			6				6.00	114.00	684.00
16Amps 3way 5 pin Socket (I No-3.7.10 of PWD S.R 2014-15)			6				6.00	147.00	882.00
Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/ dimmer/telephone socket etc on existing modular switch plate as per IS 3854 and IS 1293 GROUP B 3.7.18) 1000-1200Watts Dimmer(I No-3.7, Page no. 16 of PWD S.R 2014-15)									
	Each		12				12.00	447.00	5364.00

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...hing and fixing miniature circuit breakers on existing MCB distribution boards using necessary ... materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking ...ity of 10K and complete wiring as required confirming to IEC 60898. ...) 5-32Amps SP(I No-6.2, Page no. 54 of PWD S.R 2014-15)								
	Each	4				4.00	418.00	1672.00
...ving, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's ...meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit ...be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete ... The connection from the pipe to the conduit etc., is to be established through GI wire of size ...ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., ...pipe shall have 16 through holes of 122 mm dia (I No-7.1, Page no. 55 of PWD S.R 2014-15)								
	No							
		4				4.00	2727.00	10908.00
...ying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary ... bolts and washers. 6.7.1) 16Amps(I No-6.7, Page no. 44 of PWD S.R 2014-15)								
	Each	2				2.00	120.00	240.00
...y patty type fluorescent tube light fitting of 4'-36/40 watts fluorescent tube fitting, made out of ...heet and stove enameled with low loss open construction copper wound ferromagnetic ..., starter, locking type brass contact holders mounted on double fold type sheet base fully ...for use on230 Volts A C Supply including 1No 4'-36/40 Watts fluorescent tube. ...up 'C' KPWD SR (Ele) 2010-11								
	Each							
		10				10.00	340.00	3400.00
...T POLES: (whereas clearance between Messenger wire and ground is inadequate) a) ...ing and fixing 40mm diat 2.90 thick GI pipe 1.8m long complete with atleast 2 GI pipe 1.8m, ...mplete with atleast 2 Nos of through bolts 12 mm dia with MS back plate 100x100x6mm dia ...e bolt fixed at top deadeninding messenger wire with masonary patch work etc., complete as ...roved drawing (for single phase installations)								
	Each							
		2				2.00	525.00	1050.00
...TED CABLE ON MESSENGER WIRE Using 2 single core wires for a single phase and 4 ...ore wires for 3 phase. Supplying and stringing PVC insulated and PVC sheathed 650/1100V ...minium conductor of size supported by 3.15mm (10 SWG) GI messenger wire with two ...sulators one at each end of the span with suspenders at intervals of 0.75m. Each suspender ...of porcelain reel insulator of suitable core through which insulated wire passes(single core ...ore as the case may be) and this reel insulator shall be fixed to the messenger wire using ...0.14SWG) GI wire suitably bent and twisted. Separate reely insulator shall be provided for ...e, the messenger wire shall be ded-ended on the clamp provided to the departmental pole ...n No 4 above.(Page No.56 item No.5 a)Single Phase using 2 Wire e) 16 Sqmm								
	Rmt							
		2.00	30.00			60.00	85.00	5100.00
							Total Construction Cost	1274925.22
							GST Charges	152991.03
							Sub Total	1427916.25
							Tender Premium 5%	71395.81

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Miscellaneous and Other Charges	687.34
Grand total	1500000.00

(Rupees Fifteen Lakhs Only)

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ork spot has been inspected and the work is found necessary.

stimate is prepared as per the PRED SR 2013-14 and PW,P & IWTD SR 2016-17 and BWSSB Electrical SR 2013-14

rovisions were made in this estimate are necessary and adequate.

orks come under B.B.M.P. limits.

Asst Engineer
Ward No-13
BBMP

Asst Executive Engineer
Shettyhalli Sub-Division
BBMP

Executive Engineer.
Dasarahalli Zone
BBMP

ಸಂ. ಇ|ಡಿಡಿ|ಟಿಎಸ್|82 | 18-19 ದಿನಾಂಕ : 18|12|18

ರೂ. Rs. 15.00 Lakhs only (Rupees Fifteen lakhs only)

ಅಂದಾಜು ಪಟ್ಟಿಗೆ ಆಡಳಿತಾತ್ಮಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ

ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ.ದಾಸರಹಳ್ಳಿ ವಿಭಾಗ
ದಾಸರಹಳ್ಳಿ ವಲಯ, ಬೆಂಗಳೂರು.

ಸಂ. ಇ|ಡಿಡಿ|ಟಿಎಸ್|18 | 18-19 ದಿನಾಂಕ : 18|12|18

ರೂ. Rs. 15.00 Lakhs only (Rupees Fifteen lakhs only)

ಗಳ ಅಂದಾಜು ಪಟ್ಟಿಗೆ ತಾಂತ್ರಿಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ

ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ.ದಾಸರಹಳ್ಳಿ ವಿಭಾಗ
ದಾಸರಹಳ್ಳಿ ವಲಯ, ಬೆಂಗಳೂರು

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